

*Summary of the Official Action*

In the instant Office Action, the Examiner has indicated that claims 16 - 18 and 43 contain allowable subject matter and would be allowable if presented in independent forms that include the features of their respective base claims. Further, the Examiner has rejected claim 38 based upon formal matters and has rejected claims 1 - 15 and 19 - 42 over the art of record. By the present amendment and remarks, Applicants submit that the objections and rejections have been overcome, and respectfully request reconsideration of the outstanding Office Action and allowance of the present application.

*Traversal of Rejection Under 35 U.S.C. § 112, Second Paragraph*

Applicants traverse the rejection of claim 38 under 35 U.S.C. § 112, second paragraph, as being indefinite.

By the present amendment, claim 38 has been canceled without prejudice or disclaimer. In this regard, Applicants acknowledge that, while the belt produced in accordance with the features of the instant invention can be utilized for guiding a material web, such a feature can be arguably construed as not further defining the production process.

Accordingly, in order to advance prosecution of the instant application, have canceled this claim without prejudice or disclaimer, thereby rendering the instant rejection moot. Therefore, Applicants request that the Examiner reconsider and withdraw the rejection of claim 38 under 35 U.S.C. § 112, second paragraph, and indicate that the claims are fully in compliance with the requirements of the statute.

***Traversal of Rejection Under 35 U.S.C. § 102(b)***

1. **Over Dutt**

Applicants traverse the rejection of claims 1, 2, 5, 7, 13 - 15, 19 - 21, 24 - 26, and 30 - 38 under 35 U.S.C. § 102(b) as being anticipated by DUTT (U.S. Patent No. 5,238,537). The Examiner asserts that DUTT shows a belt for guiding a web through a nip in which the belt has an interwoven base fabric and an impregnated coating which is impenetrable to oil, water, and air, and a woven structure sufficiently open to allow total impregnation with polymeric material within the fabric voids.

Applicants' independent claim 1 recites, *inter alia*, a plurality of long-chain strength supports composed of a *metallic material* and arranged to form interstices and a filler filling at least a portion of the interstices to make said belt *fluid impermeable*. Applicants' independent claim 25 recites, *inter alia*, forming a sheet from a plurality of long-chain strength supports composed of a *metallic material*, the sheet comprising a plurality of interstices disposed between the long-chain strength supports, and at least partially filling the interstices with a filler, whereby the *sheet is made fluid impermeable*. Applicants submit that DUTT fails to anticipate at least the above-noted features of the instant invention.

In particular, Applicants note that DUTT discloses a belt for an extended nip press, which is made by impregnating a woven, preferably polyester, base fabric. While this belt is made to be impermeable to lubricating oil, Applicants note that DUTT fails to provide any

disclosure of a plurality of long-chain strength supports, and certainly no disclosure of strength supports composed of a metallic material, as recited in at least independent claims 1 and 25.

Because DUTT fails to disclose at least the above-noted features, Applicants submit that DUTT fails to show each and every recited feature of the invention, and, therefore, fails to establish an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b).

Further, Applicants submit that claims 2, 5, 7, 13, 15, 19 - 21, 24, 26, and 30 - 37 are allowable at least for the reason that these claims depend from an allowable base claim and because these claims recite additional features that further define the invention. In particular, Applicants submit that DUTT fails to anticipate, *inter alia*, the belt supports a paper web in the web producing machine, as recited in claim 2; the long-chain strength supports comprise filaments, as recited in claim 5; the long-chain strength supports comprise a substantially circular cross-section, as recited in claim 7; the filler comprises a plastic, as recited in claim 13; the fluid is a liquid, as recited in claim 15; the belt comprises a surface which substantially comprises the long-chain strength supports, as recited in claim 19; the belt is impermeable to a fluid, as recited in claim 20; the belt comprises a smooth surface which substantially comprises the long-chain strength supports covering the filler, as recited in claim 21; the belt comprises an interwoven sheet of the long-chain strength supports, as

recited in claim 24; the filler comprises a plastic, as recited in claim 26; smoothing at least one surface of the sheet after filling the sheet, as recited in claim 30; the filler comprises a liquid, as recited in claim 31; the smoothing comprises treating the at least one surface to remove a portion of the filler, as recited in claim 32; the treating comprises grinding the at least one surface, as recited in claim 33; scraping at least one surface of the sheet after filling the sheet, as recited in claim 34; the scraping comprises removing a portion of the filler from the at least one surface, as recited in claim 35; the forming further comprises weaving the long-chain strength supports, as recited in claim 36; and the weaving density is adjustable based upon a desired surface requirement, as recited in claim 37.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 1, 2, 5, 7, 13, 15, 19 - 21, 24 - 26, and 30 - 37 under 35 U.S.C. § 102(b) and indicate that these claims are allowable.

2. Over Romanski '038

Applicants traverse the rejection of claims 1, 3 - 6, 13, and 24 - 29 under 35 U.S.C. § 102(b) as being anticipated by ROMANSKI et al. (U.S. Patent No. 4,015,038) [hereinafter “ROMANSKI ‘038”].

Applicants note that, while disclosing crosswise yarns of synthetic organic fibers braided over a core of glass fibers and/or metal wire, ROMANSKI ‘038 fails to provide any disclosure of strength supports composed of metallic material, as recited in at least

independent claims 1 and 25.

Moreover, Applicants note that, even assuming *arguendo*, that the Examiner were to consider the metal wire core of ROMANSKI '038 as composed of the recited strength supports, which Applicants submit it is not, ROMANSKI '038 fails to provide any teaching of filling the interstices of the strength supports with filler to form a fluid impermeable belt, as is also recited in at least independent claims 1 and 25. That is, the only teaching in ROMANSKI '038 with regard to coatings is related to the yarn, not the core.

Further, Applicants submit that ROMANSKI '038 fails to provide any disclosure of making a fluid impermeable belt. In this regard, while ROMANSKI '038 *coats* the yarn, there is no disclosure of reducing the permeability of the fabric, see, e.g., column 3, lines 7 - 10 ("The coating is applied so as to completely and evenly encapsulate the warp and weft yarns and their compound filaments without closing the spaces between the adjacent yarns.").

Because ROMANSKI '038 fails to disclose at least the above-noted features, Applicants submit that ROMANSKI '038 fails to show each and every recited feature of the invention, and, therefore, fails to establish an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b).

Further, Applicants submit that claims 3 - 6, 13, 24, and 26 - 29 are allowable at least for the reason that these claims depend from an allowable base claim and because these claims recite additional features that further define the invention. In particular, Applicants

submit that ROMANSKI ‘038 fails to anticipate, *inter alia*, the long-chain strength supports comprise a metal having a high thermal conductivity, as recited in claim 3; the metal is one of stainless steel and bronze, as recited in claim 4; the long-chain strength supports comprise filaments, as recited in claim 5; the filaments comprise a metal, as recited in claim 6; the filler comprises a plastic, as recited in claim 13; the belt comprises an interwoven sheet of the long-chain strength supports, as recited in claim 24; the filler comprises a plastic, as recited in claim 26; the long-chain strength supports comprise a metal, as recited in claim 27; the filling further comprises dipping the sheet into a liquid filler, as recited in claim 28; the filling further comprises spraying the sheet with a liquid filler, as recited in claim 29.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 1, 3 - 6, 13, and 24 - 29 under 35 U.S.C. § 102(b) and indicate that these claims are allowable.

3. Over Romanski ‘372

Applicants traverse the rejection of claims 1, 2, 5, 7, 13, 19, 21 - 26, 28, 31, and 36 - 38 under 35 U.S.C. § 102(b) as being anticipated by ROMANSKI (U.S. Patent No. 4,224,372) [hereinafter “ROMANSKI ‘372”].

In contrast to the instant invention, Applicants note that ROMANSKI ‘372 is directed to a woven fabric made of synthetic fibers impregnated with a foam. Thus, Applicants submit that ROMANSKI ‘372 fails to provide any disclosure of strength supports composed

of metallic material, as recited in at least independent claims 1 and 25.

Moreover, as ROMANSKI '372 fails to disclose the recited strength supports, Applicants submit that ROMANSKI '372 certainly fails to teach at least partially filling the interstices of the strength supports with a filler to make the belt fluid impermeable, as recited in at least the independent claims.

Applicants further note that, while ROMANSKI '372 discloses that the fibers are impregnated with a foam to reduce the fabric's permeability, there is no disclosure of any intention of rendering the belt fluid impermeable, as recited in the instant claims, and certainly no teaching of making the belt fluid impermeable by at least partially filling interstices of metallic strength supports with filler, as recited in the pending claims.

Because ROMANSKI '372 fails to disclose at least the above-noted features, Applicants submit that ROMANSKI '372 fails to show each and every recited feature of the invention, and, therefore, fails to establish an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b).

Further, Applicants submit that claims 2, 5, 7, 13, 19, 21 - 24, 26, 28, 31, and 36 - 37 are allowable at least for the reason that these claims depend from an allowable base claim and because these claims recite additional features that further define the invention. In particular, Applicants submit that ROMANSKI '372 fails to anticipate, *inter alia*, the belt supports a paper web in the web producing machine, as recited in claim 2; the long-chain

strength supports comprise filaments, as recited in claim 5; the long-chain strength supports comprise a substantially circular cross-section, as recited in claim 7; the filler comprises a plastic, as recited in claim 13; the belt comprises a surface which substantially comprises the long-chain strength supports, as recited in claim 19; the belt comprises a smooth surface which substantially comprises the long-chain strength supports covering the filler, as recited in claim 21; the belt comprises a screen, as recited in claim 22; the screen is flexible and formed of woven long-chain strength supports, as recited in claim 23; the belt comprises an interwoven sheet of the long-chain strength supports, as recited in claim 24; the filler comprises a plastic, as recited in claim 26; the filling further comprises dipping the sheet into a liquid filler, as recited in claim 28; the filler comprises a liquid, as recited in claim 31; the forming further comprises weaving the long-chain strength supports, as recited in claim 36; and the weaving density is adjustable based upon a desired surface requirement, as recited in claim 37.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 1, 2, 5, 7, 13, 19, 21 - 26, 28, 31, and 36 - 37 under 35 U.S.C. § 102(b) and indicate that these claims are allowable.

***Traversal of Rejection Under 35 U.S.C. § 102(b)/35 U.S.C. § 103(a)***

Applicants traverse the rejection of claims 1, 3 - 6, 12, 22 - 27, 36, 39, 41, and 42 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §

103(a) as being obvious over NOPPER et al. (U.S. Patent No. 3,968,296) [hereinafter “NOPPER”].

Applicants note that NOPPER discloses a pressure compensator, not a belt for use in the manufacture of material webs. Moreover, Applicants note that, while NOPPER discloses a wire mesh, there is no teaching or suggestion of a plurality of long-chain strength supports composed of a *metallic material* and arranged to form interstices and a filler filling at least a portion of the interstices to make said belt *fluid impermeable*, as recited in at least independent claim 1, nor is there any disclosure of forming a sheet from a plurality of long-chain strength supports composed of a *metallic material*, the sheet comprising a plurality of interstices disposed between the long-chain strength supports, and at least partially filling the interstices with a filler, whereby the *sheet is made fluid impermeable*, as recited in at least independent claim 25.

Applicants also note that the structural features of the instant invention provide the necessary lightweight and flexibility to utilize the belt in the material web production process, and that flexibility is certainly not a concern or a desire for NOPPER. Thus, Applicants further submit that it would not have been obvious to one ordinarily skilled in the art to modify NOPPER in the manner asserted by the Examiner, since to do so would create a flexible plate which could not operate in the manner intended by NOPPER as a pressure compensator.

In addition to the foregoing discussion, Applicants' independent claim 39 recites, *inter alia*, a flexible wire screen and a filler which at least partially fills the interstices *to form a fluid impermeable screen*, and independent claim 42 recites, *inter alia*, filling at least a portion of the interstices with a plastic filler, and *scraping a portion of the filler from at least one surface of the sheet to expose the metal filaments*. Applicants submit that NOPPER fails to disclose at least the above-noted features of the instant invention.

As noted above, NOPPER is directed to a pressure plate, and there is no disclosure that the filler is removed to expose any of the fibers. In fact, as depicted in Figure 3, there would not appear to be any teaching for removing filler to expose fibers, as recited in at least independent claim 42. Moreover, Applicants note that NOPPER fails to provide any suggestion that would motivate one ordinarily skilled in the art to modify the NOPPER plate to expose fibers.

Further, Applicants note that NOPPER fails to provide any teaching that pressure plate 7 is a flexible woven metal screen, as recited in at least independent claim 39, and, in fact, appears to teach against flexibility, since such flexibility would likely compromise the ability of the pressure plate to act in its intended manner. NOPPER likewise fails to provide any disclosure that pressure plate 7 is fluid impermeable, as is also recited in at least independent claim 39.

Because NOPPER fails to disclose at least the above-noted features of the instant

invention, Applicants submit that this document fails to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b), and, therefore, that the instant rejection is improper and should be withdrawn.

Further, Applicants submit that no proper modification of NOPPER teaches or suggests the combination of features recited in at least independent claim 1, 25, 39, or 42, whereby NOPPER fails to render unpatentable the instant invention. Further, as the applied art fails to provide the requisite motivation or rationale for modifying NOPPER in the manner asserted by the Examiner, Applicants submit that this document fails to render the instant invention obvious.

Accordingly, Applicants submit that the rejections under 35 U.S.C. § 102(b) and/or 35 U.S.C. § 103(a) are improper and should be withdrawn.

Further, Applicants submit that claims 3 - 6, 13, 22 - 24, 26, 27, 36, 41 are allowable at least for the reason that these claims depend from an allowable base claim and because these claims recite additional features that further define the invention. In particular, Applicants submit that no proper modification of NOPPER teaches or suggests, *inter alia*, the long-chain strength supports comprise a metal having a high thermal conductivity, as recited in claim 3; the metal is one of stainless steel and bronze, as recited in claim 4; the long-chain strength supports comprise filaments, as recited in claim 5; the filaments comprise a metal, as recited in claim 6; the filler comprises a plastic, as recited in claim 13; the belt

comprises a screen, as recited in claim 22; the screen is flexible and formed of woven long-chain strength supports, as recited in claim 23; the belt comprises an interwoven sheet of the long-chain strength supports, as recited in claim 24; the filler comprises a plastic, as recited in claim 26; the long-chain strength supports comprise a metal, as recited in claim 27; the forming further comprises weaving the long-chain strength supports, as recited in claim 36; and the metal comprises stainless steel, as recited in claim 42.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 1, 3 - 6, 13, 22 - 27, 36, 39, 41, and 42 under 35 U.S.C. § 102(b)/35 U.S.C. § 103(a) and indicate that these claims are allowable.

***Traversal of Rejection Under 35 U.S.C. § 103(a)***

1. *Over Nopper in view of Kastner*

Applicants traverse the rejection of claims 8, 10, and 40 under 35 U.S.C. § 103(a) as being unpatentable over NOPPER in view of KASTNER (U.S. Patent No. 1,794,624).

As discussed above, NOPPER teaches a pressure plate that is rigidly constructed, and provides no teaching or suggestion for modifying the construction of the pressure plate to form a belt that includes long-chain links, which provide flexibility.

Further, Applicants note that KASTNER fails to teach or suggest the subject matter noted above as deficient in NOPPER. In particular, Applicants submit that KASTNER fails to provide any teaching or suggestion that would render it obvious to modify the pressure

plate of NOPPER in such a manner that it would no longer operate in the manner intended, i.e., a flexible plate would not provide the desired pressure compensation.

Accordingly, Applicants submit that the art of record fails to provide the requisite motivation or rationale for modifying NOPPER in the manner asserted by the Examiner, such that no proper combination of NOPPER and KASTNER can render obvious the instant invention as recited in at least independent claims 1 and 39.

Further, Applicants submit that claims 8, 10, and 40 are allowable at least for the reason that these claims depend from an allowable base claim and because these claims recite additional features that further define the invention. In particular, Applicants submit that no proper combination of NOPPER and KASTNER teaches or suggests, *inter alia*, the long-chain strength supports comprise a substantially rectangular cross-section, as recited in claim 8; the long-chain strength supports comprise a substantially oval cross-section, as recited in claim 10; and at least two filaments disposed within the interstices and running substantially perpendicular to the longitudinal direction, as recited in claim 40.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 8, 10, and 40 under 35 U.S.C. § 103(a) and indicate that these claims are allowable.

2. Over Dutt in view of Keller

Applicants traverse the rejection of claims 9 and 11 under 35 U.S.C. § 103(a) as being

unpatentable over DUTT in view of KELLER (U.S. Patent No. 5,597,646).

As discussed above, DUTT fails to disclose a plurality of strength supports composed of metallic material, as recited in at least independent claim 1. Further, as the belt of DUTT is utilized as a press belt, it is not apparent that the use of a metallic material would not adversely affect the operation of the belt. That is, DUTT specifically discloses synthetic materials presumably because the stain and bending that the press belt will undergo. As such, it would not have been obvious to one ordinarily skilled in the art to modify DUTT to change the synthetic fibers to a metallic material, since this would appear to compromise flexibility of the DUTT belt as well as possibly damage the surface coating when the metallic material is pressed by the press shoe.

Further, Applicants note that KELLER fails to provide any teaching or suggestion of modifying DUTT in any manner which would render the invention recited in at least independent claim 1 obvious. That is, KELLER does not teach or suggest that it would have been obvious to utilize metallic material in the belt, nor that the use of such would not adversely affect operation as a press belt.

Accordingly, Applicants submit that the art of record fails to provide the necessary motivation or rationale for combining the documents in the manner asserted by the Examiner. Further, Applicants submit that no proper combination of DUTT and KELLER teaches or suggests the combination of features recited in at least independent claim 1.

Further, Applicants submit that claims 9 and 11 are allowable at least for the reason that these claims depend from an allowable base claim and because these claims recite additional features that further define the invention. In particular, Applicants submit that no proper combination of DUTT and KELLER teaches or suggests, *inter alia*, the long-chain strength supports comprise a substantially square cross-section, as recited in claim 9; and the long-chain strength supports comprise a polygonal cross-section, as recited in claim 11.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 9 and 11 under 35 U.S.C. § 103(a) and indicate that these claims are allowable.

2. Over Dutt in view of Bowen, Jr.

Applicants traverse the rejection of claim 12 under 35 U.S.C. § 103(a) as being unpatentable over DUTT in view of BOWEN, Jr. (U.S. Patent No. 5,449,548).

Because DUTT fails to disclose a plurality of strength supports composed of metallic material, as recited in at least independent claim 1, and because the belt of DUTT is utilized as a press belt, Applicants submit that it would not have been obvious to modify DUTT to include supports composed of a metallic material, since it would appear such a modification would adversely affect the operation of the belt.

Further, Applicants note that Bowen, Jr. fails to provide any teaching or suggestion of modifying DUTT in any manner which would render the invention recited in at least

independent claim 1 obvious. That is, Bowen, Jr. does not teach or suggest that it would have been obvious to utilize metallic material in the belt, nor that the use of such would not adversely affect operation as a press belt.

Accordingly, Applicants submit that the art of record fails to provide the necessary motivation or rationale for combining the documents in the manner asserted by the Examiner. Further, Applicants submit that no proper combination of DUTT and Bowen, Jr. teaches or suggests the combination of features recited in at least independent claim 1.

Further, Applicants submit that claim 12 is allowable at least for the reason that it depends from an allowable base claim and because it recites additional features that further define the invention. In particular, Applicants submit that no proper combination of DUTT and Bowen, Jr. teaches or suggests, *inter alia*, the long-chain strength supports comprise a variable cross-sectional shape along their lengths, as recited in claim 12.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claim 12 under 35 U.S.C. § 103(a) and indicate that this claim is allowable.

***Newly Submitted Claim is Allowable***

Applicants submit that newly presented claim 44 is allowable at least for the reason that it depends from an allowable base claim and because it recites additional features that further define the invention. In particular, Applicants submit that the art of record fails to anticipate or render obvious, *inter alia*, on at least one surface of said belt, at least a portion

of said metal filaments are exposed, as recited in claim 44.

Accordingly, Applicants request that the Examiner consider the merits of new claim 44 and indicate that this claim is allowable.

***Application is Allowable***

Thus, Applicants respectfully submit that each and every pending claim of the present invention meets the requirements for patentability under 35 U.S.C. §§ 102 and 103, and respectfully request the Examiner to indicate allowance of each and every pending claim of the present invention.

***Authorization to Charge Deposit Account***

If for any reason a check including the amount for any necessary fees is not associated with this file, the Commissioner is authorized to charge to Deposit Account No. 19 - 0089 the amounts identified herein for the missing check, as well as any necessary fees not explicitly identified, including any extensions of time fees required to place the application in condition for allowance by Examiner's Amendment, in order to maintain pendency of this application.

**CONCLUSION**

In view of the foregoing, it is submitted that none of the references of record, either taken alone or in any proper combination thereof, anticipate or render obvious the Applicants' invention, as recited in each of claims 1 - 13, 15 - 27, and 29 - 44. The claims have been amended to eliminate any arguable basis for rejection under 35 U.S.C. § 112. In addition,

the applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

Further, any amendments to the claims which have been made in this response and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Accordingly, reconsideration of the outstanding Office Action and allowance of the present application and all the claims therein are respectfully requested and now believed to be appropriate.

Respectfully submitted,  
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